

In the Claims:

Please amend the claims as follows:

~~Patent claims:~~

What is claimed is:

1. (Amended) An apparatus for reforming rod-shaped, electrically conductive and/or magnetizable materials ~~(2), in particular for drawing and extruding, having the following features comprising:~~

- the apparatus ~~(1)~~ has a female mold ~~(3)~~ having a die ~~(2)~~, which forms ~~the~~ a tool for reforming;

- the apparatus ~~(1)~~ has an inductor ~~(5)~~ of an electric linear motor, by means of which a traveling electric field can be produced;

- the inductor ~~(5)~~ comprises at least one first group ~~(6)~~ at least with first coils ~~(8)~~;

- the first coils ~~(8)~~ in the first group ~~(6)~~ are arranged axially next to one another and thus form a channel ~~(12)~~;

- using the inductor ~~(5)~~ it is possible to produce a traveling field in the channel ~~(12)~~ which has a magnetic flux density having a gradient in the axial direction of the channel ~~(12)~~,

~~characterized in that~~
wherein

the gradient has an amplitude of greater than $B = 1 \text{ T}$, and at least some of the first coils ~~(8)~~ have a conductor ~~(9)~~ which has a resistivity of $\rho = 0.017 \cdot 10^{-6} \Omega\text{m}$ or less.

2. (Amended) The apparatus as claimed in ~~the preceding claim,~~
~~characterized in that~~ claim 1, wherein the inductor (5) has a
 second group (7) at least with first coils (8).

3. (Amended) The apparatus as claimed in ~~the preceding claim,~~
~~characterized in that~~ claim 2, wherein the first group (6) and
 the second group (7) are arranged on opposite sides of the female
 mold (3), the first coils (8) of the two groups being coaxial
 with respect to the die (4) of the female mold (3).

4. (Amended) The apparatus as claimed in ~~one of the preceding~~
~~claims, characterized in that~~ claim 2, wherein the first group
 (6) and possibly the second group (7) have second coils, which
 engage around the first coils and are coaxial with respect to the
 first coils.

5. (Amended) The apparatus as claimed in ~~the preceding claim,~~
~~characterized in that~~ claim 4, wherein the first group (6) and
 possibly the second group (7) have further, namely third, fourth,
~~... n-th~~ comprise a plurality of coils, which engage around the
~~second or third, ... (n-1)-th~~ coils and are coaxial with respect
 to the ~~second or third, ... (n-1)-th~~ plurality of coils.

6. (Amended) The apparatus as claimed in ~~one of the preceding~~
~~claims, characterized in that~~ claim 1, wherein in each case a
 disk (10) made of a magnetizable material is arranged between the
first coils (8) which are arranged coaxially next to one another.

7. (Amended) The apparatus as claimed in ~~the preceding claim,~~
~~characterized in that~~ claim 1, wherein the ~~disks~~ (8) ~~first coils~~
 have an outer edge (11) which is bent back to one side.

8. (Amended) The apparatus as claimed in ~~the preceding claim,~~

~~characterized in that~~ claim 7, wherein the bent-back edge (11) covers an adjacent, first coil ~~(8)~~ or a stack of adjacent and coaxially arranged coils.

9. (Amended) The apparatus as claimed in ~~one of the preceding claims, characterized in that~~ claim 1, wherein the apparatus ~~(1)~~ has means for cooling the rod-shaped material ~~(2)~~ to be reformed.

10. (Amended) The apparatus as claimed in ~~the preceding claim, characterized in that~~ claim 9, wherein the means for cooling apply a first cooling medium to the channel ~~(12)~~.

11. (Amended) The apparatus as claimed in ~~the preceding claim, characterized in that~~ claim 10, wherein the first cooling medium is air or an oil.

12. (Amended) The apparatus as claimed in ~~the preceding claim, characterized in that~~ claim 11, wherein the electrical current density in the first coils ~~(8)~~ is greater than $J = 10 \text{ A/mm}^2$.

13. (Amended) The apparatus as claimed in ~~one of the preceding claims, characterized in that~~ claim 1, wherein at least some of the first coils ~~(8)~~ have conductors ~~(9)~~ which are superconducting.

14. (Amended) The apparatus as claimed in ~~the preceding claim, characterized in that~~ claim 13, wherein the superconducting conductors ~~(9)~~ are made of a material which has a critical temperature of greater than $T = 77 \text{ K}$.

15. (Amended) The apparatus as claimed in ~~one of the preceding claims, characterized in that~~ claim 1, wherein at least some of the first coils ~~(8)~~ have conductors ~~(9)~~ which have a channel ~~(12)~~.

16. (Amended) The apparatus as claimed in ~~the preceding claim,~~ characterized in that claim 15, wherein a second cooling medium can be applied to the channel (12) in the conductor (9).

17. (Amended) A method for reforming rod-shaped, electrically conductive and/or magnetizable materials ~~(2), in particular drawing and extruding,~~ using the apparatus as claimed in ~~one of~~ claims 1 to 16 claim 1, having the following steps:

Step a) in one step, the material to be reformed is introduced into a the channel ~~(12)~~;

Step b) in one step, a traveling magnetic field having a gradient lying in the channel direction is produced in the channel ~~(12)~~ and has, in ~~the~~ center of the channel ~~(12)~~, a magnetic flux density having an amplitude of greater than $B = 1 \text{ T}$; and

Step c) in one step, the material ~~(2)~~ is introduced into the die ~~(4)~~ of the female mold ~~(3)~~.

18. (Amended) The method as claimed in ~~the preceding claim,~~ characterized in that ~~firstly~~ claim 17, wherein step c) is performed, followed by step a), and then followed by step b) ~~in accordance with claim 17 is carried out.~~

19. (Amended) The method as claimed in claim 17, ~~characterized in that firstly~~ wherein step c) is followed by step b), and followed by step a) ~~in accordance with claim 17 is carried out.~~

20. (Amended) The method as claimed in claim 17, ~~characterized in that firstly~~ wherein step a) is followed by step b), and followed by step c) ~~in accordance with claim 17 is carried out.~~

21. (Amended) The method as claimed in claim 17, ~~characterized in that firstly wherein~~ step b), is followed by step a), and followed by step c) ~~in accordance with claim 17 is carried out.~~

22. The method as claimed in claim 17, ~~characterized by the following steps wherein~~

Step a1) in one step, the material ~~(2)~~ to be reformed is introduced into a first part of the channel ~~(12)~~;

Step a2) in one step, the material ~~(2)~~ is introduced into a second part of the channel ~~(12)~~;

Step b1) in one step, the traveling magnetic field is produced in the first part of the channel ~~(12)~~; and

Step b2) in one step, the traveling magnetic field is produced in the second part of the channel ~~(12)~~.

23. (Amended) The method as claimed in claim 22, ~~characterized in that~~ wherein the steps are carried out in the following sequence: Step a1), Step c), Step b1) ((+)) and Step b2).

24. The method as claimed in claim 22, ~~characterized in that~~ wherein the steps are carried out in the following sequence: Step b1) ((+)) and Step b2), Step a1), Step c), and Step a2).